

Supporting Information

Epimeric Monosaccharide-Quinone Hybrids on Gold Electrode toward the Electrochemical Probing of Specific Carbohydrate-Protein Recognitions

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4. ¹³C NMR spectra of compound **1**, **4**, **5**;
5. HR-ESI-MS of spectrum of compound **2**

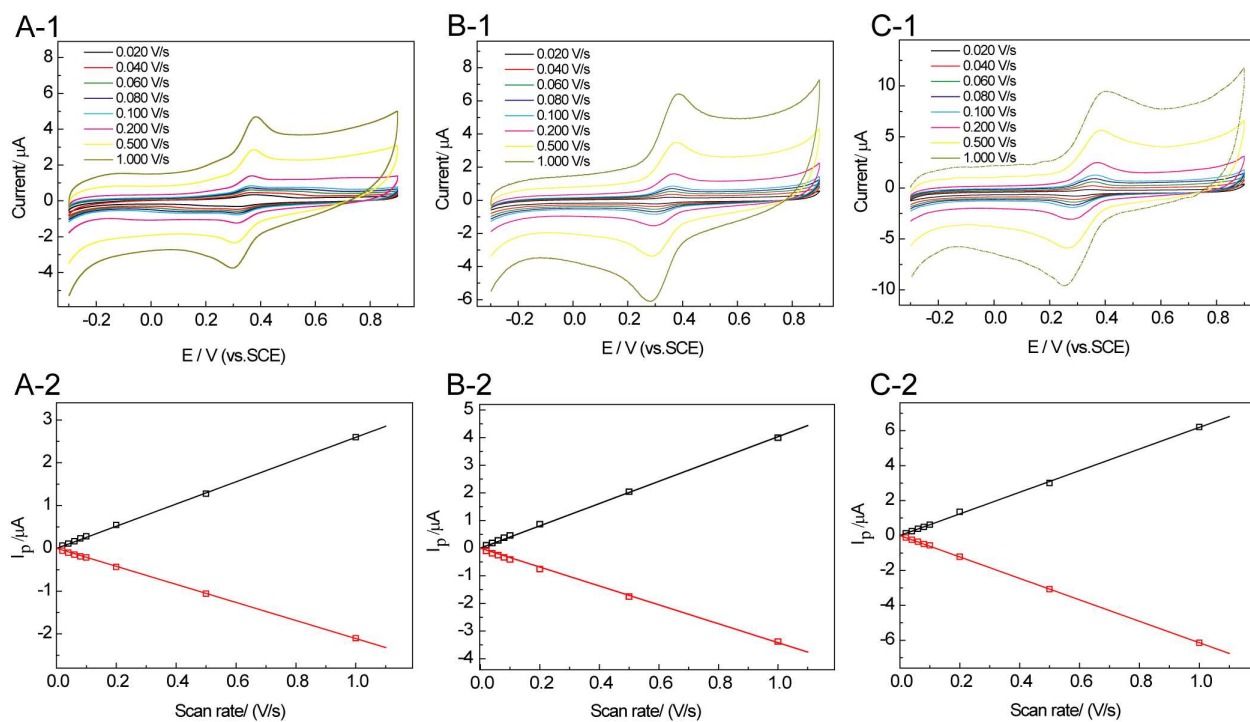


Figure S-1. The CVs were recorded in 0.1 M H₂SO₄ at scan rates from 0.020 to 1.000 V/s as illustrated in A-1, B-1 and C-1. Peak currents of SAM **1**, **2** and **3** on gold electrodes, I_p , as a function of scan rate, v as illustrated in A-2, B-2 and C-2. All first scans were initiated in the positive direction from -0.3 V.

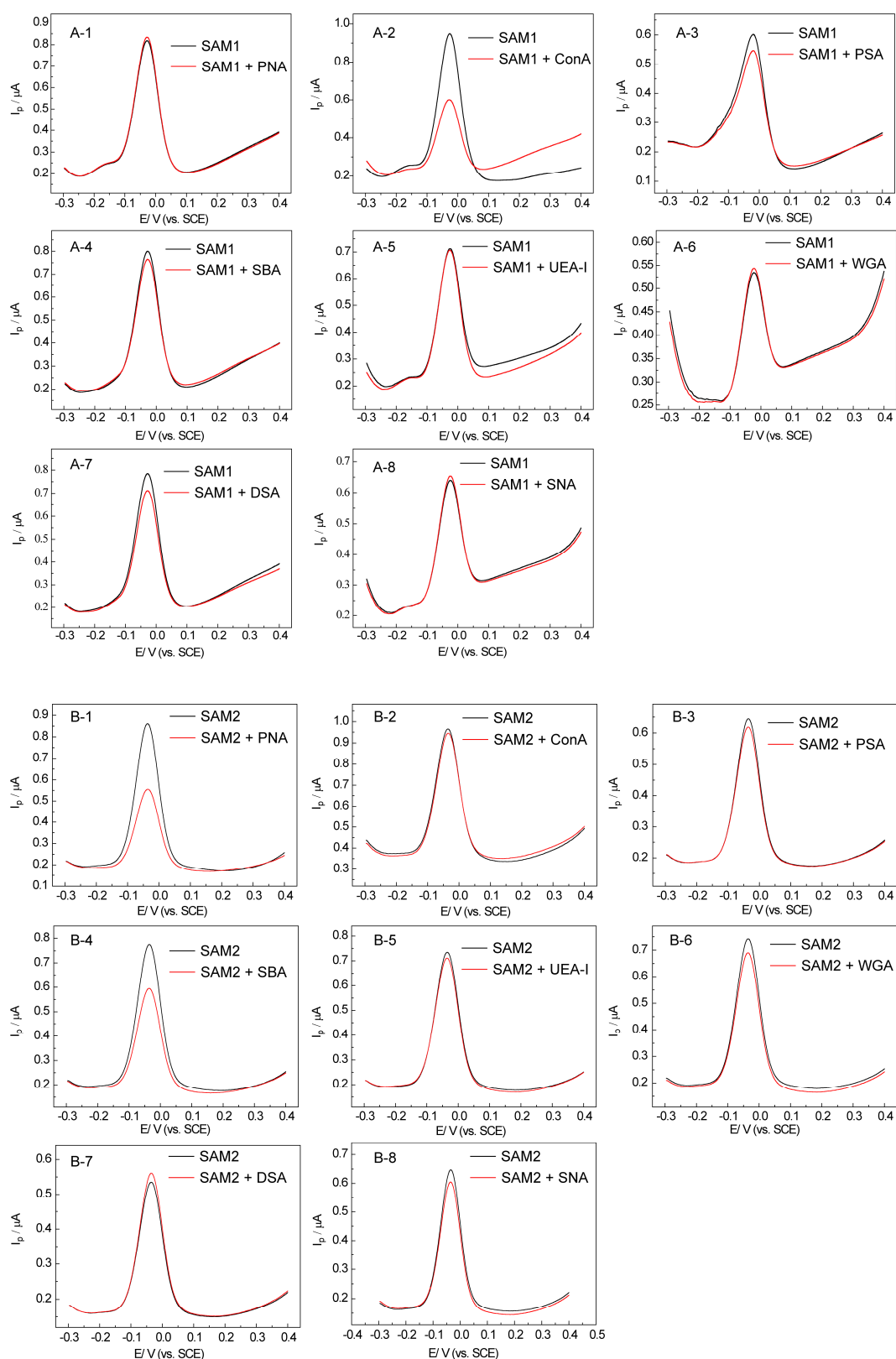
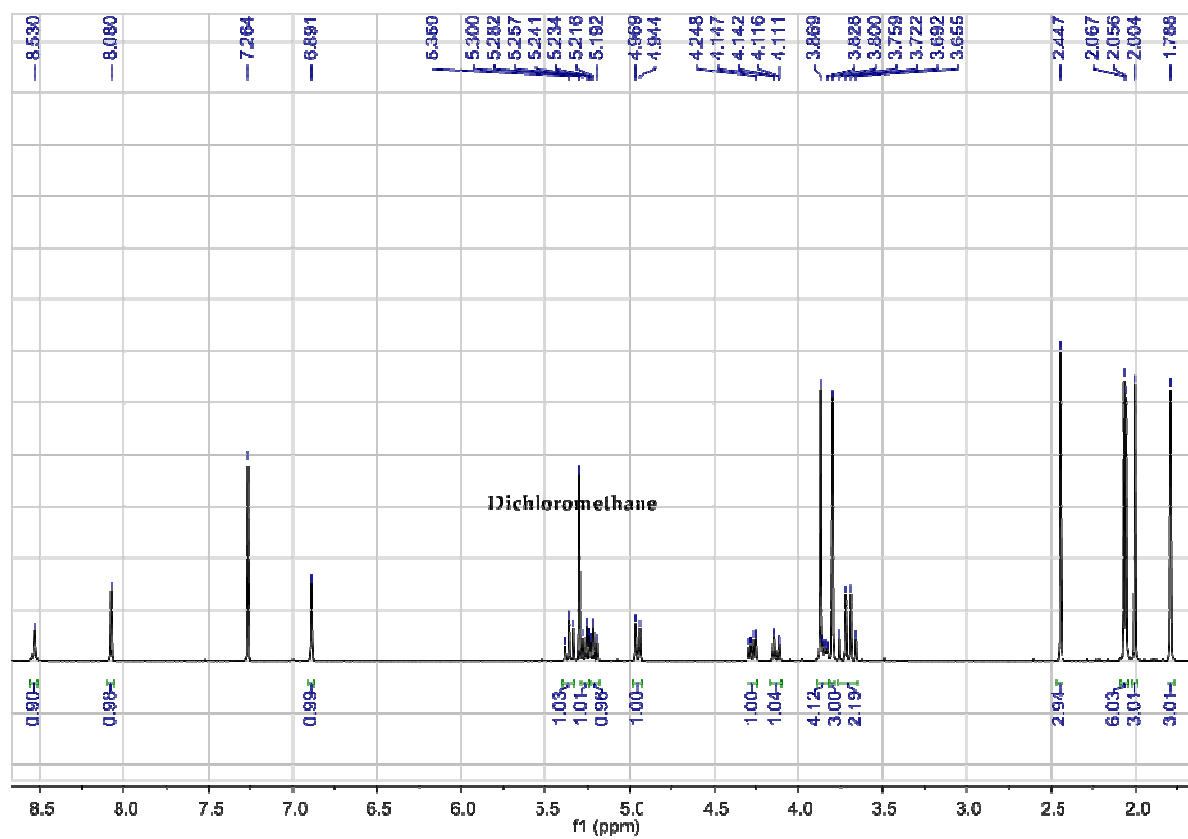
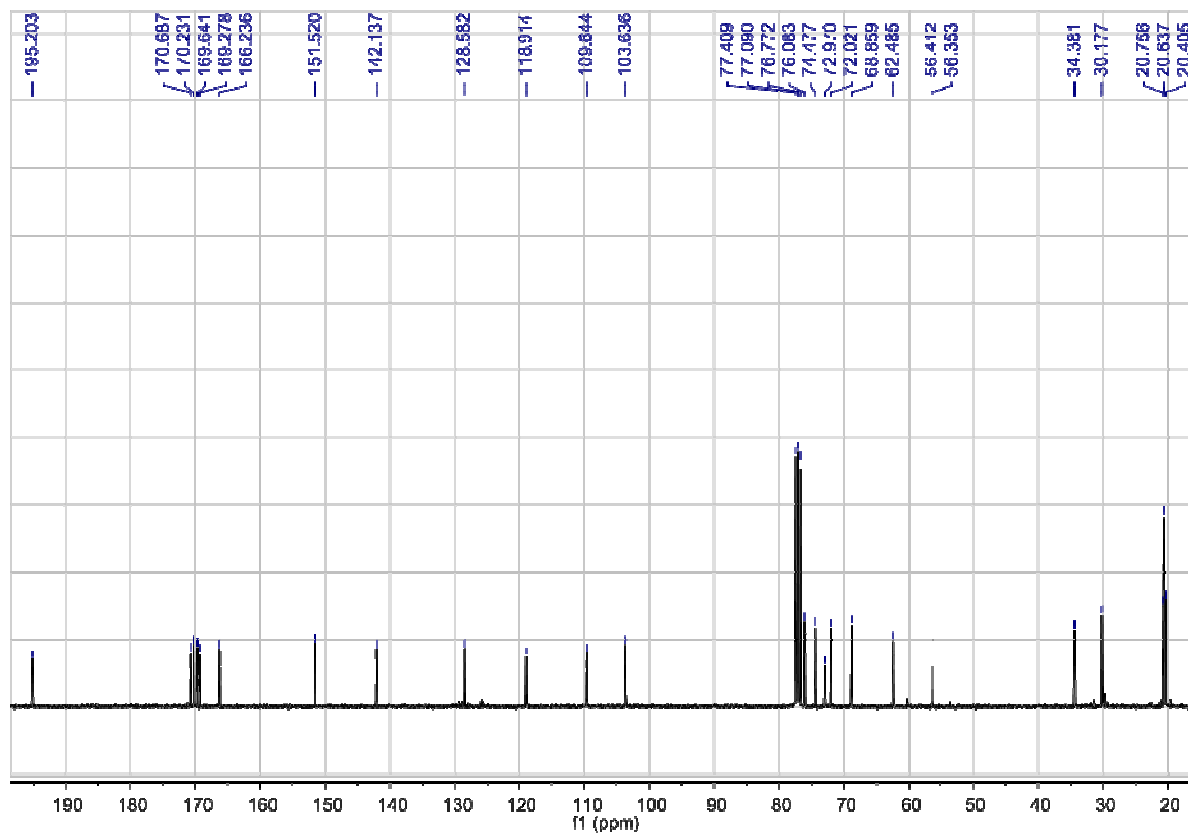


Figure S-2. DPV plots of (A) SAM 1 and (B) SAM 2 upon addition of 7 μM of various specific and non-specific lectins.

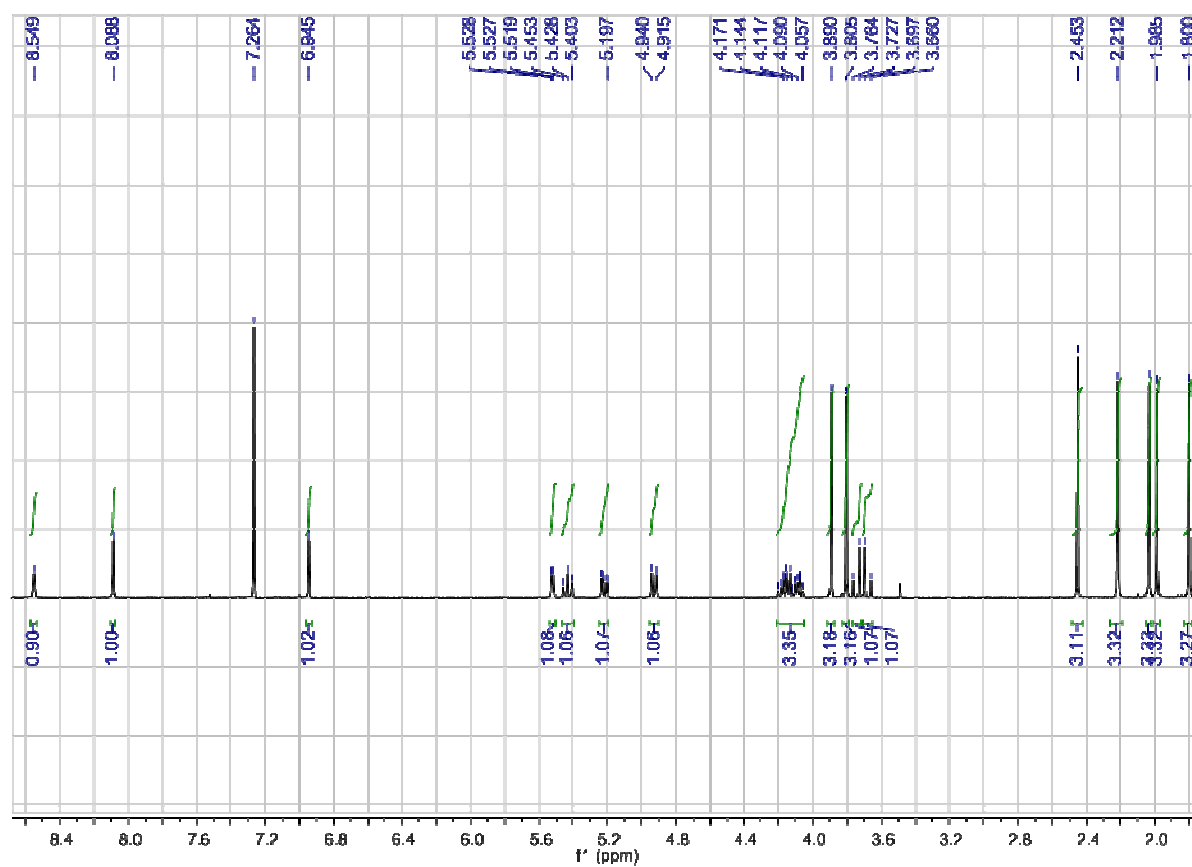
¹H NMR of compound 4 ($\delta = 7.26$, CDCl₃):



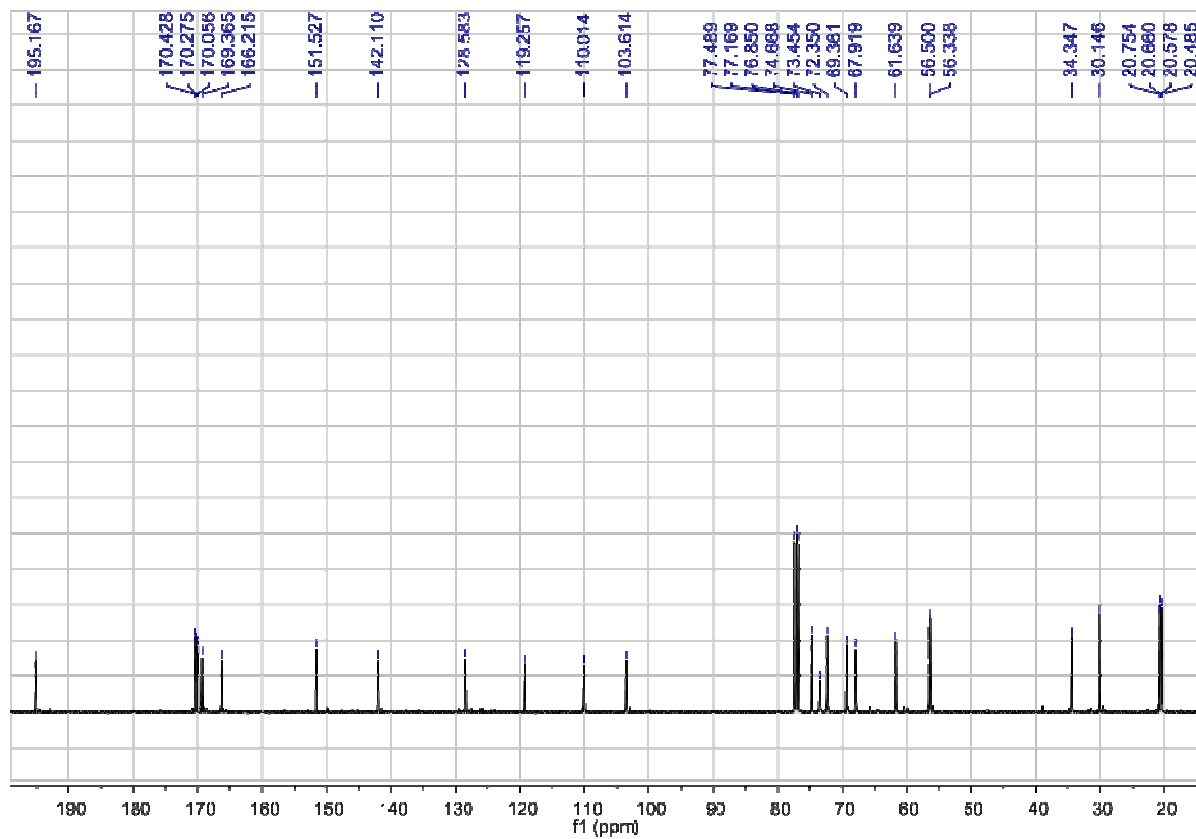
^{13}C NMR of compound 4 ($\delta = 77.4, 77.1, 76.8, \text{CDCl}_3$):



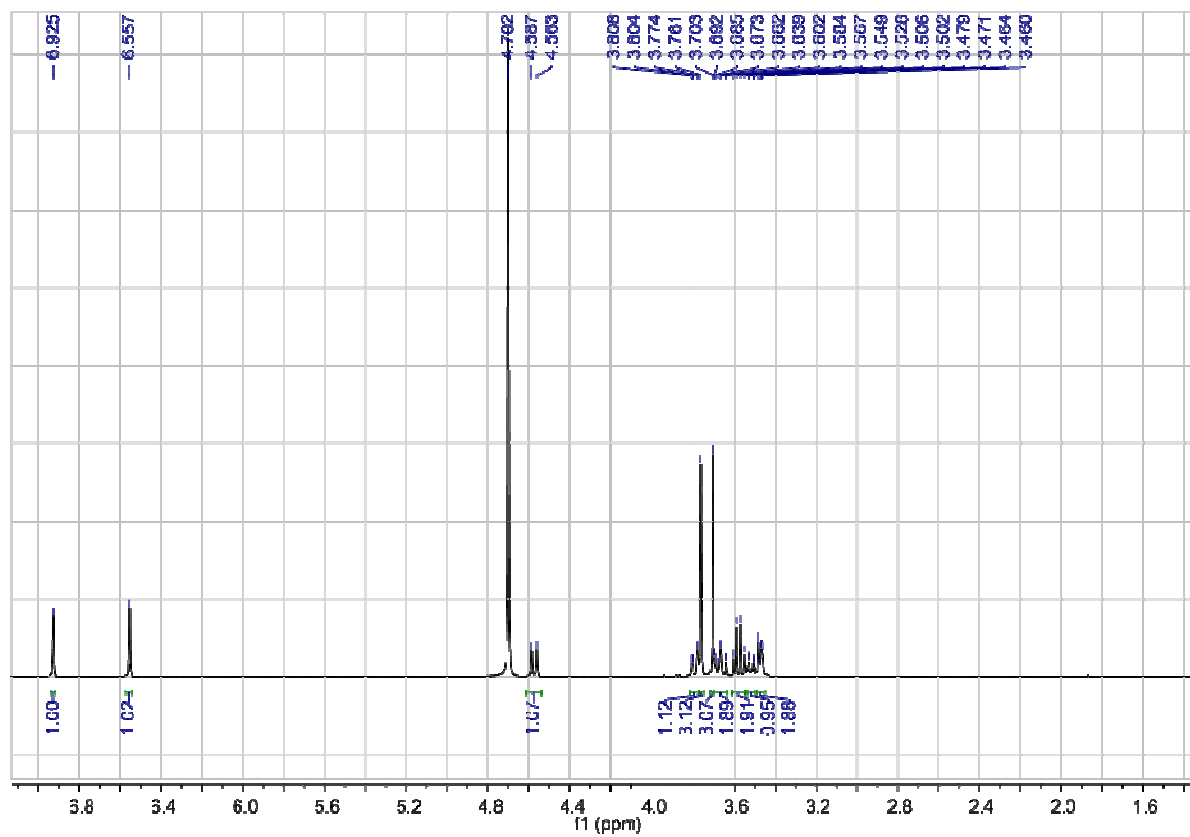
¹H NMR of compound 5 ($\delta = 7.26$, CDCl₃):



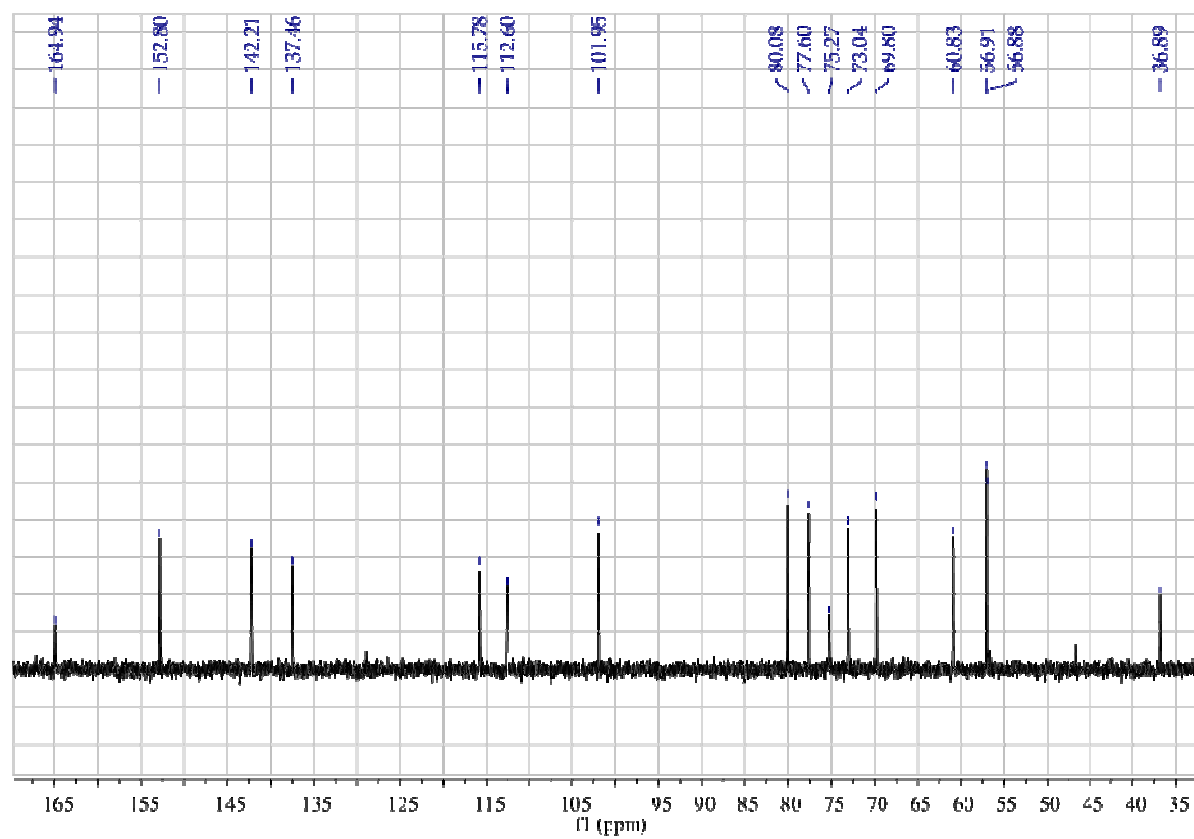
^{13}C NMR of compound 5 ($\delta = 77.5, 77.2, 76.9, \text{CDCl}_3$):



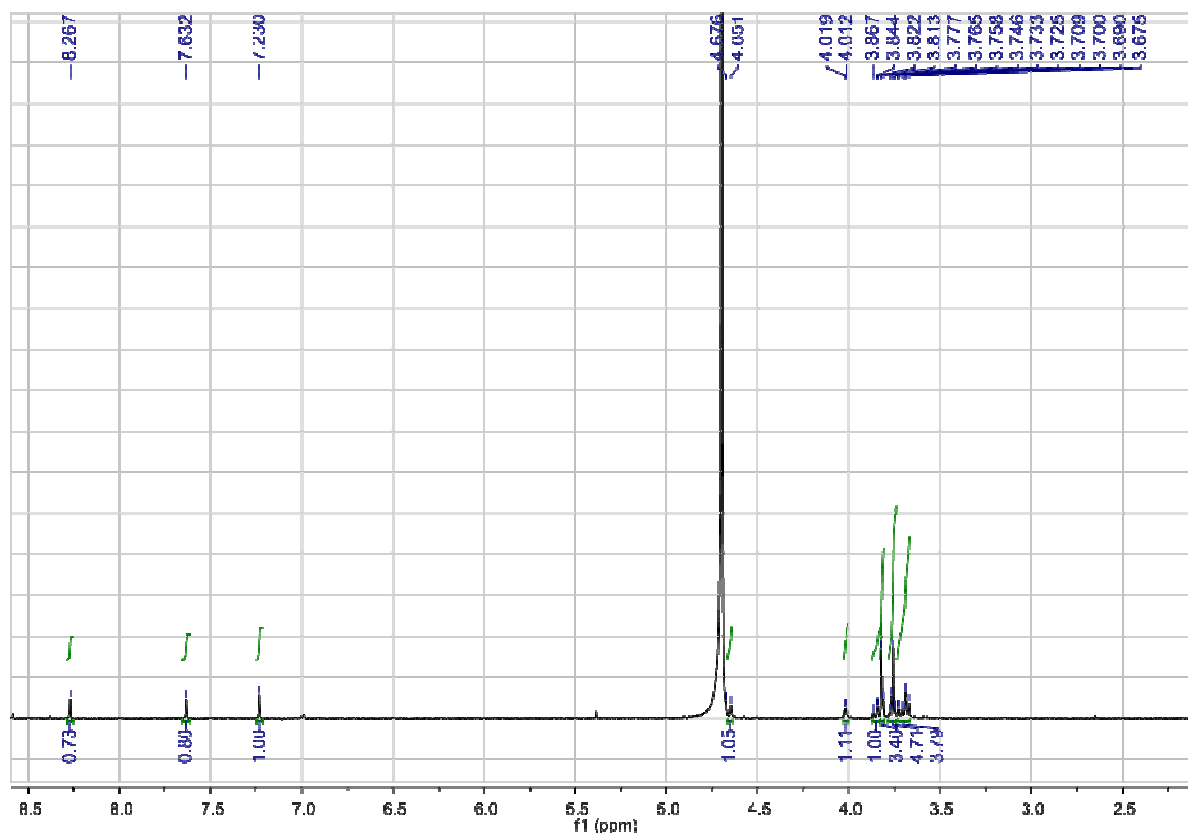
¹H NMR of compound 1 ($\delta = 4.70$, D₂O):



¹³C NMR of compound 1:



¹H NMR of compound 2 ($\delta = 4.70$, D₂O):



HR(ESI)MS of compound 2:

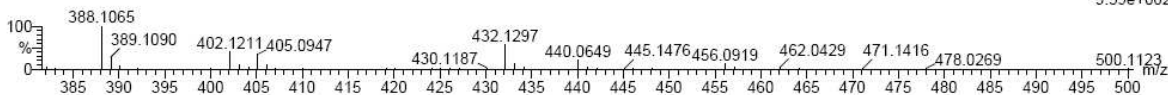
Elemental Composition Report

Single Mass Analysis

Tolerance = 3.0 mDa / DBE: min = -1.5, max = 150.0
Element prediction: Off
Number of isotope peaks used for i-FIT = 2

Monoisotopic Mass, Even Electron Ions
180 formula(e) evaluated with 1 results within limits (all results (up to 1000) for each mass)
Elements Used:
C: 1-18 H: 0-25 N: 1-3 O: 0-8 S: 0-4
LONG-YT
LYT-JXP05 58 (1.884) Cm (57.61)

2: TOF MS ES-
9.59e+002



Minimum: -1.5
Maximum: 3.0 5.0 150.0

| Mass | Calc. Mass | mDa | PPM | DBE | i-FIT | i-FIT (Norm) | Formula |
|----------|------------|------|------|-----|-------|--------------|----------------|
| 388.1065 | 388.1066 | -0.1 | -0.3 | 6.5 | 9.7 | 0.0 | C16 H22 N O8 S |